

INFORMATION TECHNOLOGY AND DESKILLING OF  
PROFESSIONAL CATALOGUERS WITH SPECIAL  
REFERENCE TO ACADEMIC LIBRARIES IN THE  
WESTERN CAPE

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information science

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## **TABLE OF CONTENTS**

### **PAGES**

<b>ACKNOWLEDGEMENTS</b>	i
<b>SUMMARY</b>	i i
<b>1 INTRODUCTION</b>	1
1.1 Purpose of study	1
1.1.1 Statement of problem	2
1.1.2 Definition of concepts	3
1.2 Proposed method of investigation	5
1.2.1 Literature survey	5
1.2.3 Empirical investigation	5
<b>2 BIBLIOGRAPHIC NETWORKS AND INFORMATION TECHNOLOGY</b>	7
2.1 Information technology and libraries	7
2.2 Technology and the role of academic libraries	1 0
2.3 Bibliographic networks	1 2
2.3.1 Bibliographic networks in South Africa	1 4
2.3.1.1 The Marc Record	1 6
2.3.1.2 South African Machine Readable Cataloguing (SAMSRC)	1 7
2.4 Cataloguing and information technology	1 8
2.4.1 The effects of information technology on cataloguing	2 1
2.4.1.1 Financial constraints	2 2
2.4.1.2 Deprofessionalisation	2 5
2.4.1.3 Staff reductions and displacements	3 1
2.4.2 Authority control	4 1
<b>3 EMPIRICAL INVESTIGATION</b>	4 4
3.1 Design and methodology	4 4
3.1.1 Questionnaire construction	4 7
3.2 Pilot survey	4 9
3.3 Survey population	5 1
3.4 Questionnaire distribution	5 1
3.5 Limitations of the study	5 2
3.6 Data analysis	5 2
3.6.1 Overall response	5 2
<b>4 CONCLUSIONS</b>	7 1
4.1 Review of statement of problem	7 1
4.2 Summary of conclusions	7 3
4.3 Recommendations	7 6
<b>5 SOURCES CITED</b>	7 7
<b>6 APPENDICES</b>	
6.1 Covering letter	
6.2 Questionnaire	

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## SUMMARY

An investigation was undertaken to establish whether it was possible to assume that information technology has had an influence of the skills levels in the jobs of cataloguers.

The research was conducted in two parts : the literature survey and the empirical investigation. The survey of literature was done on the literature from the United States of America (USA), from the United Kingdom (UK) and also from limited South African resource. The overseas literature was related to the situation in South Africa. The empirical investigation was confined to the academic libraries in the Western Cape region of South Africa.

For the empirical investigation a mail questionnaire was constructed and sent to respondents in order to determine whether information technology was indeed affecting the skills of cataloguers in the academic libraries.

The analysis of data obtained from the results of the questionnaire indicated that there was no sign of a negative influence in the skills levels of cataloguers in Western Cape Africa.

Indeed, it seemed was apparent from the analysis of data that cataloguers find information technology to be a positive influence on their skills and on enhancing their status.

## 1. INTRODUCTION

Much of the literature in librarianship focuses on the changes which have been brought by technology in the library environment. This new technology has made the traditional world of librarianship undergo profound changes.

The shift from manual to automated systems has in many ways affected the nature of librarian's jobs. Some have viewed information technology as a tool liberating librarians from dull repetitive work, while for some it has been said to represent an opportunity for greater skills development.

The increasing use of automated systems and the new developments in information technologies has also been held responsible for blurring the distinctions between professional and non-professional work. This is said to have occurred when the work once performed by professional cataloguers is delegated to the support staff at lower organizational level, thus reducing the size of the professional cataloguing departments.

### 1.1 Purpose of study

As already indicated, there are a number of works which address the question of technology and workers in libraries. It is however to be noted that these studies have been conducted in the

United States and not much if any has been conducted in South Africa. In American investigations some authors such as Hafter (1986) and Harris (1992) have concluded that information technology deskills cataloguers, while others like Barnett (1988:99) have questioned such conclusions and found them to be "puzzling".

In this work the researcher wished to explore the impact of network utilities on professional cataloguers and also to find out how technology has affected typical skills levels of cataloguers.

#### 1.1.1 Statement of problem

From the literature surveyed, it appeared that information technology and bibliographic utilities have had a considerable influence on the jobs of cataloguers. This work therefore attempted to investigate the following assumptions:

- (i) that information technology has changed the jobs of cataloguers in the Western Cape
- (ii) that bibliographic networks allow copy cataloguing to be executed at a lowest level by clerical staff
- (iii) that library automation has led to the reduction in the size of cataloguing staff
- (iv) that a perception exists that information technology has deskilled or deprofessionalized cataloguers.

It is therefore the purpose of this dissertation to establish

whether the above mentioned points are also relevant to the cataloguers in the Western Cape of South Africa and to further establish if the statement made by Hafter(1986:125) that, "increased reliance on networks creates a trend towards the deprofessionalization of cataloguing" is evident in the academic libraries of investigated.

This dissertation is therefore aimed at:

- (i) examining the effects of cataloguing networks on the jobs of cataloguers
- (ii) determining whether information technology has led to the displacement of cataloguer's skills, or has improved their skills.

#### 1.1.2 Definition of concepts

**Deskilling** has been defined as the process which occurs when work becomes fragmented, routinized, and the worker loses control over the pace, quality and sequence of operations. In the process, one job is subdivided into several, all of them specialised and easier to execute, and all of them can subsequently be executed by less educated, and lower paid workers (Harris,1994:183).

**Deprofessionalization** includes losing "exclusive mastery" over the profession's services, the loss of the service ideal, and failure to retain legal monopoly over admission, training, licensing, and judgement of performance (Harris,1992:8).



**Original cataloguing** refers to cataloguing done for individual items for which there is no cataloguing record available. The cataloguer must determine a bibliographic description according to the accepted cataloguing rules and must assign subject headings and classification codes (Hafter, 1986:169).

**Copy cataloguing** is cataloguing done using a cataloguing record from another source such as the Library of Congress or a network member library. It is assumed that a cataloguer in another member library has already done the cataloguing. However, the record may have to be modified to meet the institutions's real or perceived cataloguing requirements (Hafter, 1986:169).

A **Bibliographic utility** is an agency which assumes responsibility for the production of cataloguing data which is made available, together with specific services, for example retrospective conversion, to any library willing to pay the related subscription(s) or other costs. Such utilities may be profit or non-profit making (Hunter and Bakewell, 1991:xix).

**Non-professional staff** in this research denotes library staff members who are not hired into positions requiring library science qualifications. These people perform the support level tasks - that is they are assigned high level support responsibilities in positions where tasks are specific to libraries. They perform these duties under the supervision of a qualified librarian. Other terms used for these positions are para-professionals, library assistants and technical assistants.

## 1.2 Proposed method of investigation

### 1.2.1 Literature survey

To determine whether information technology deskills cataloguers in South African academic libraries, it was essential to begin by understanding what deskilling is and to establishing whether or to what extent there is a connection between information technology and deskilling. In order to understand the concept of deskilling and information technology, a survey of literature was carried out. Chapter two of this dissertation therefore consists of a survey of the relevant literature, chapter three is the empirical survey, while chapter four consists of conclusions; the cited sources make chapter five and lastly the appendices are found in chapter six.

### 1.2.2 Empirical investigation

To find out what effect information technology has on the jobs of cataloguers in South Africa, academic libraries in the Western Cape were considered to be suitable locations for the investigation.

The questionnaire method was chosen over other investigative methods because of its appropriateness in relation to the research to be carried out. The mail questionnaire was found to be advantageous in that it encourages frank answers and can

guarantee anonymity for the respondent as it is completed in the absence of the researcher (Powell,1991:84).

The questionnaires were therefore sent to the cataloguers in the five academic libraries participating in the research. The data obtained out of the questionnaires will be described and analysed and the conclusions will be drawn out of which necessary recommendations will be made.

## **2. BIBLIOGRAPHIC NETWORKS AND INFORMATION TECHNOLOGY**

### **2.1 Information technology and libraries**

Information technology is now a pervasive term, often used synonymously for "new technology" or "new information technology" and loosely applied by both expert and layman to a wide range of systems Burton (1992:169). It is therefore necessary to define what information technology relates to in this research.

Information technology according to the definition given by Cawkell (1993:169) in the Encyclopedic Dictionary of Information Technology and systems, is "processing or communicating information with the aid of electronic machines."

This definition is further expanded in the Macmillan dictionary of information technology as follows;

*"Information technology has arisen as a separate technology, by the convergence of computing, telecommunications and video techniques, computing providing the capability for processing and storing information, telecommunications providing the vehicle for communicating it and video proving high quality display of images. The convergence has been catalysed by the availability of complex, reliable and cost effective, microelectronic components and equipment. (Longley and Shain, 1989:262)*

The "new technology" has influenced many sectors of the library. As new types of computers, telecommunications and other technologies are developed, information becomes available not only in different forms and different ways, but in greater efficiency and speed (Barnshaw, 1987:76). Library and information

services, like most other organizations, adopted the use of information technology to free themselves from routine aspects of their work and processes. The primary goal of automating the technical services, of which cataloguing is a component, has been to increase productivity, to broaden accessibility of information and to eliminate duplication of effort and to share resources.

Since the 1960's technology has been bringing about great changes in libraries, and these changes have often first been introduced in technical services departments. Likewise, as Botha (1991:93) indicated in South Africa as early as 1964, the first article dealing with automation of catalogues was published. By the mid-1960's the first library computerization projects in Southern Africa started with the universities taking the lead.

Technical services rely heavily on the computerised library systems. On the horizon there are more sophisticated workstations to facilitate the cataloguing activities and other functions.

The technological developments which seem to have had the widest impact to date on technical services in libraries, are the growth and development of large computerized library systems. Bibliographic utilities have prospered in large part because of the role they play in cataloguing. Automation in the form of computer readable records of library materials has revolutionized the practice of cataloguing and these changes have occurred at an accelerated rate (Johnson, 1991:333).

For many libraries, there has been expanded access to information beyond contents of the card catalogue in the electronic version. Card catalogues have been replaced by an online public access catalogue of machine readable records based on the standardized machine readable cataloguing (MARC) format. Cataloguing records are derived from major bibliographic utilities which specialize in support of a variety of library bibliographic services, including provision of cataloguing records for online, automated interlibrary loans and regional shared databases (Gosling, 1991:8).

Lansley (1987:129) says that new technology has the potential to bring about positive and negative changes in the work environment. It can produce centralised control or decentralised, small scale decision making. It can lead to the creation of a gulf between a small powerful and well paid elite and a large group of workers in lower paid routine positions, but it can also be used to create more interesting positions requiring a number of different skills. It can produce staff redundancies or be used to create new services, employing more staff.

It is the negative aspect, which involves the reduction of skills of cataloguers, that has caused a concern among some authors. The consensus is that the growth of bibliographic networks, combined with introduction of local online cataloguing systems, has extensively changed the jobs and skills requirements in the technical services, particularly cataloguing. As a result of

this, cataloguing productivity has increased tremendously and backlogs are disappearing. However, increased productivity has also led to staff reductions (Bednar,1988:145) .

There is a general agreement that the bibliographic utilities have allowed some duties once performed by professional cataloguers, such as copy cataloguing, to be carried out at a lower organizational level. The literature also claims that utilities have left the cataloguers with fewer items requiring original cataloguing, thus reducing the need for professional cataloguers (Faruta,1990:243) .

It is inevitable that automation will change employee work patterns. The computer application not only leads to major productivity increases, but also to significant changes in the parameters and definitions of existing jobs. Staff will be confronted with an entirely new series of job titles with totally or partially changed job content. In most organizations, this will mandate the review and reclassification of many positions (Rooks and Thomposon:125) .

## 2.2 Technology and the role of academic libraries

The goal of academic libraries is to acquire, document, and facilitate the use of information and materials that support the research and teaching programs of their parent institutions. The

main activities which are carried out by academic libraries include collection management, acquisitions, circulation, reference service and cataloguing which comprises of the duties of recording, describing and indexing of the library holdings (Cline and Sinnott, 1983:2).

Academic libraries will need to play a leading role in the technological revolution in order to successfully maintain their positions as the principal information resources and services. Technological innovation has been adopted by the libraries as a chance to make daily, routine tasks easier, especially with computerisation of functions such as cataloguing and circulation. These developments have taken place in USA, Britain and likewise in South Africa.

De Gennaro (1984:1205) asserted that, in this "electronic era", information will multiply and become more ephemeral and the task of bringing it under control will become more difficult and more vital. These new information processing technologies will increase the importance and enlarge the role and capabilities of academic libraries. He further stressed that this is the electronic age where universities and libraries that serve them, must be much more than collections of books. Knowledge is being created and communicated at expanding rates and this is causing profound changes in both economics and technology of libraries.



### 2.3 Bibliographic networks

Cooperative cataloguing involves an agreement between a number of libraries to share the work. A natural result of such cooperation is often the production of a union catalogue which will contain entries and locations relating to the stock of more than one library. Cooperative cataloguing began when libraries started looking for less expensive and faster ways to process material. In 1901, the Library of Congress began supplying printed cards and developing the union catalogue, and in 1948, to reflect the idea of collective cataloguing better, the union catalogue was renamed the National Union Catalog (Bleil and Renner, 1990:96).

The real growth in shared cataloguing came in 1967 with the establishment and development of the Ohio College Library Centre (OCLC). Its first computerized service became operational in 1970, with a batch-processed machine readable catalogue (MARC) - based monograph cataloguing system. In 1971 this was replaced by an online remote access system which led to a great expansion (Hunter and Bakewell, 1991:201).

The OCLC has since the early years of the 1970s turned into a not-for-profit membership organisation that makes available a broad range of computer-based processes, products, and services for library users, and educational organisations. Today, known as Online Computer Library Center and no longer limited to Ohio, this international computer network is used by libraries around

the world to order and catalogue library materials, order machine-readable records, borrow from other libraries, and gain access to other databases (Woodsworth,1991:12).

The Western Library network (WLN) dates back to 1967, when Washington state library assumed responsibility for developing the network. In 1977 it became fully operational. However, in order to reflect the client base more accurately, it changed its name from Washington to Western Library Network in 1985 (Hunter and Bakewell, 1991:202).

WLN provides its members with shared cataloguing and catalogue maintenance, and offers an automated acquisitions facility. Its services have also been extending progressively to cover the whole western and mid-western area of USA. (Hunter and Bakewell,191:204).

The Research Libraries Group was established in the early 1970s. Its information, like other networks which followed after the OCLC, were attracted by the growth of OCLC. Some leaders of large research libraries expressed doubt whether the OCLC would be able to fulfil the programmatic needs of their libraries, thus the formation of the RLG in 1974. In 1981, it was renamed Research Libraries Information network (RLIN) (Woodsworth,1991:16). RLG also established its own cataloguing cooperation and like the other networks it supports the original cataloguing and cataloguing obtained from source files or contributed by other RLIN participants. To facilitate

cataloguing decisions, RLIN provides online search and only access to the Library of Congress name authority and subject authority files. Other notable services include online acquisitions and interlibrary loan subsystem (Hunter and Bakewell, 1991:205.)

The University of Toronto Library Automation system (UTLAS) originated as a unit in the University of Toronto in 1963. This was at the time when the library was converting its catalogue to machine readable form. In 1971, UTLAS was organised into a separate administrative unit in the library. In 1983 it was incorporated as a separate company by the International Thompson Organisation, and since then it expanded in both the United States and the Far East (Woodsworth, 1991:14).

### 2.3.1 Bibliographic networks in South Africa

In South Africa the major bibliographic network utility is South African Bibliographic Network (SABINET). Sabinet was established in 1983, based on WLN as a non-profit making utility company (De Jager, 1993:66). SABINET provides an online shared access computerised multi-function, multi-database system, which is accessible country-wide (Van Niekerk, 1988:190).

Unfortunately the use of WLN system in due course proved not to have been a good decision for the South African situation. The reasons for this were tabulated by Botha as follows:

1. the desirability, indeed necessity for the national network

to be able to accept bibliographic records in SAMARC format

2. the inability of the WLN system to cope with the multilingual nature of the publications of Southern Africa

(Botha, 1992:94) .

As a result of these constraints, SABINET decided to develop its own South African networking package and it was decided SABINET should be based on the ERUDITE library system. The system was produced locally and was able to cope with the demands of the South African multi-lingual environment (Botha, 1992:94) . However, in 1995 a decision was taken to find a more modern information retrieval platform which would allow a single user-interface to the SABINET databases, and OCLC was then found suitable (SABINET Newsletter:1995) .

Libraries which are members of SABINET have an on-line access to the bibliographic databases held in SABINET's host computer. The bibliographic database is compiled jointly by SABINET and participating members. SABINET incorporates bibliographic entries which are already available internationally in MARC format. These entries are contained on magnetic tapes which are fed onto the computer (Behrens, 1988:150) .

SABINET offers extensive services such as cooperative cataloguing which means SABINET members are able to share cataloguing activities and thus save on time, labour, and intellectual effort ( Behrens, 1988:150) . Before ordering a new record, SABINET members can search the database to find out whether the record

is already in another library, or on order by another library. SABINET further offers facilities which enhance the interlending system in Southern Africa (Behrens, 1988:152).

SABINET includes bibliographic databases such as the South African National Bibliography (SANB), Periodicals in Southern African Libraries (PISAL), Index to South African Periodicals (ISAP) and S.A. Joint Catalogue of Monographs, 1971-. This means that SABINET members can search those bibliographic control tools on-line instead of using the hard copy or microfiche forms. (Behrens, 1988:152).

SABINET is mainly used for bibliographic verification, checking of holdings and online cataloguing. In addition it provides access to some separate databases such as the Union Catalogue of Thesis and Dissertations, the Index to South African Periodicals and Whitaker's Book in Print (De Jager, 1993:67).

#### 2.3.1.1 The MARC record

Another significant event without which library cooperation and networking could not have evolved as it did in the 1970s, was the development and acceptance of an International Standard for Machine Readable Catalogue Records - MARC record format.

In order for libraries to share cataloguing through a bibliographic network, it is necessary for the records to be in a standard format. The internationally recognised format is

known as MARC. Although MARC was developed in the United States, there are a number of national and regional variants on the MARC format in other countries e.g. USMARC, UKMARC etc. In South Africa, on SABINET, the basic format record is changed from the USMARC to the South African National Record Format (SAMARC) (Van Niekerk, 1988:197).

#### 2.3.1.2 South African machine readable cataloguing (SAMARC)

In South Africa bibliographic entries in databases are standardised according to a format known as SAMARC. SAMARC is a method of representing bibliographic information in a format which is computer readable i.e each element in the entry (for example author and title) can be recognised by the computer programme and consequently manipulated in various ways (Behrens, 1988:150).

SAMARC was established with the primary purpose of facilitating the national exchange of bibliographic data in machine-readable form between centres and to provide an easy conversion to an international format for the purpose of making South African national bibliographic records available to other countries (Van Niekerk, 1982:v).

It was expected that libraries in South Africa would be responsible for the translation of bibliographic records from their own processing formats into SAMARC for transmission to other libraries and that they will receive machine readable

records in South African format from other libraries and translate them into their own processing formats. Because SAMARC was intended to provide the information required for a range of bibliographic activities, it therefore included a comprehensive set of content designators of which some may be essential to one or another of these activities, but not to all (Van Niekerk, 1982:v).

#### 2.4 Cataloguing and information technology

Hunter and Bakewell defined cataloguing as the art of describing and listing material in such a way to make it as easy as possible to discover the nature and extent of what is available and, if appropriate, where this material may be located or obtained (1991:2).

The cataloguing process, as further defined by Hunter and Bakewell, basically consists of two operations. These are the creation of the appropriate entry relating to a particular item and the subsequent manipulation of this and other entries to form the actual catalogue. The first operation demands the intellectual element which can at present only be supplied by a human being, while the second involves clerical functions which may also be performed very effectively by the computer, such as the sorting out catalogue entries into any desired order (Hunter and Bakewell, 1991:2-3).

The intellectual tasks of describing the physical item,

establishing authorized entries, and analysing subject content remain much the same in an automated environment, though these tasks may be performed using computerized resource tools. Computers have proven useful in handling clerical processes, such as file management and supporting a variety of products from the machine readable cataloguing record, from cards to on-line public access catalogues. The ease with which cataloguing records can be shared among many libraries is one of the greatest benefits of library automation, as it reduces costs (Johnson, 1991:333).

Prior to automation, the following activities were undertaken by cataloguers : recording, describing and indexing the holdings of the library, thereby determining the number and kinds of access points for retrieving each individual item. Furthermore, Hafter states that cataloguers used to specialise in subject or language areas. Their duties may also have included retrieving of all the materials acquired in those areas and cataloguing the "hot items", (that is highly demanded items, to get them quickly circulated) and the difficult ones. This kept the cataloguers knowledgeable about the subject area and much better equipped to be able to assign subject headings and classification numbers. However, with the introduction of computers in libraries, the English language material is now done by assistants and the cataloguer has to work in several subject areas, as there are not enough items that require professional input (Hafter, 1987:72).

As the processing and circulation workloads increased in



libraries, many manual systems were brought to the limits of their effectiveness and often beyond. For instance, overwhelming backlogs of uncatalogued material began to accumulate in many libraries. In response to their new levels of activity, libraries hired more staff. However, as time passed, another kind of solution to what were primarily data-processing problems became feasible - and that solution was computers. (Cline and Sinnott, 1983:13).

The cataloguing and classification of materials to make information accessible for users of libraries and information services has always been relatively high in costs. Cataloguing is one of the most expensive library operations, often occupying more librarians and support staff than any other unit. Therefore labour costs form a large component of cataloguing costs. According to Louw (1986 : 6), this is an area where it has long been recognised that intellectual effort involved in original cataloguing could, once it has been accomplished in one library, be used in the other.

Cataloguing provides physical and intellectual control over library items, by classifying, describing and providing access to the materials in the library's collection. This makes original cataloguing a time consuming task.

The Library of Congress has estimated that its cataloguers need from about three to five hours to catalogue a typical book (Johnson, 1991:333).

To ease some of the "burden" of cataloguing, libraries have come to share the records they create. The first library to make its data widely available was the Library of Congress. At the turn of the century, it began selling copies of its catalogue cards (Cline and Sinnott, 1983:6).

#### 2.4.1 The effects of information technology on cataloguing

Technology has brought about many changes in library technical services departments. Some of these changes have had negative impacts on the library personnel, while some have been able positively to enhance the state of library services. In the United States and other European countries where technology has advanced, the majority of libraries have adopted some aspect of technology for specific applications.

Computers have therefore been approved as suitable for supporting data-processing activities. It was inevitable that libraries eventually would examine the possibility of their use within the libraries (Cline and Sinnott:1983,13). Because many technical services are repetitive, they therefore became an early focus of library automation and this involves cataloguing.

One of the benefits of using computers in cataloguing has been in catalogue maintenance. Catalogue maintenance has been enhanced greatly through automated developments. In order to correct a record in the card catalogue, a staff member had to edit or revise the existing record and generate new cards for

filing into the local card catalogues, replacing the old catalogue set. Today, changes to the online files are accomplished efficiently and quickly by machine batch process or by manual interactive editing of the record within the online catalogue. Thousands of changes can be made quickly and economically, often through the use of global change commands. Online maintenance is making it possible to respond to the request for corrections in all elements of the online record in a timely manner and at a rate that would have been impossible in the card file (Gosling,1991:13).

#### 2.4.1.1 Financial constraints

Libraries are coping with technology and tight budgets in a variety of ways. Through the use of automation, libraries are able to reorganise the technical services departments more efficiently and reassign professional cataloguers to other positions in the library. This can lead to a more productive use of resources, wider professional experience for cataloguers, and better services for the patrons.

Economic pressures are making it necessary, and technological advances are making it possible, for libraries to share their resources. Libraries are coming to terms with the new economic and technological realities today. They are replacing their cumbersome procedures with more effective computer and telecommunications systems and they are developing efficient resource sharing capabilities by participating in networks (De

Gennaro, 1984:1206). Shared cataloguing is cheaper than original cataloguing in most cases.

Technical services activities in libraries have been faced by times of economic difficulties. Because processing is not perceived as being directly service oriented, and because it usually takes a large portion of the budget, libraries are always looking for ways of decreasing the processing costs. Also because cataloguing is quantifiable, increased efficiency can always be sought (Bleil and Renner, 1990:99).

The problems of tight budgets suggest that libraries look more towards resource sharing as the library budgets decrease and the sophistication of computer systems increase. However, the question is, if cooperative cataloguing is to be used, who will do the work? Bleil and Renner (1990:100) suggest that this is where libraries may save costs. In their view, it does not take an original cataloguer to edit existing bibliographic copy, unless classification or subject headings need to be assigned, or the authority of an access point is in question. Well trained support staff can handle the cooperative cataloguing and reconcile bibliographic and authority records.

In the studies separately carried out by Holley (1981) and Hafter (1986) in the United States, they both concluded that financial constraints in libraries can be one of the major forces behind the reduction in the numbers of professional cataloguers in academic libraries. They suggest that the burden of adapting to

limited budgets by libraries has fallen heavily upon the technical services, especially upon cataloguing. The main reason is that in most libraries, technical processing represents a significant part of the budget. Therefore, the need to control finances and to provide services which are computer or network based, compels the administration to consider ways of reallocating resources.

The attempt to justify costs and the ambition to do more has forced libraries to embrace technology. In the United States, Ruschoff (1995:51) observed that the attempt to do more with less has on the technical side tended to mean providing more services with fewer people. Personnel costs in library cataloguing departments account for about 85 percent of the typical technical services budget, so cost containment logically means job elimination.

To express this point further, in his article, Holley writes that,

*"the economic difficulties facing the public and academic libraries have provided the greatest impetus for change and account for current trends which in the final analysis are attempts to survive with few resources"* (1981:90)

As economic conditions in universities continue to worsen, it has increasingly become difficult to finance library automation. Competition with other departments over limited funds will surely intensify and libraries will have to opt for other ways of

funding their services. The most common way of saving the costs have so far been through staff reductions (Cline and Sinnott,1983:135).

#### 2.4.1.2 Deprofessionalization

Harris (1992:121) has postulated that with the prominent and ever changing role of automated systems in the field of librarianship, the pattern of work in this occupation has changed drastically. As a result, areas such as cataloguing are undergoing a process of deprofessionalization or deskilling in the USA.

Deprofessionalization was defined in 1.3 as the process which occurs when the field loses its "exclusive mastery" over a profession's services, the loss of the service ideal and failure to retain a legal monopoly over admission, training, licensing, and the judgement of performance (Harris,1992:8). In libraries this occurs when some of the activities are automated and work becomes routinized as a result. In this case, the activities of cataloguing librarians, who at one time performed what many would consider to be the core function of the profession, become routinized. The major cause of loss of control has been the widespread use of cataloguing networks or bibliographic utilities, which provide libraries with access to online databases containing millions of cataloguing records. Through these services, libraries need no longer do original cataloguing for most materials. Instead they can simply purchase and download the cataloguing records they need, already prepared

(Harris, 1992:121).

According to Toren (1976:329), the source of deprofessionalization which stems from the knowledge base of some professions, is related to the ongoing process of technological innovation and specialisation. It is argued that as the knowledge becomes more rational, precise and specific, professional performance is susceptible to standardisation and routinization.

Larwood (1992) refers to deskilling as the process of taking the requirement of intelligence and education out of the job, and this process seems most likely to occur when the nature of the task being computerised, is repetitive.

Malinconico suggested that technologies deskill labour. He said that the fundamental purpose of the technologies is to reduce the level of skill needed to perform particular tasks. Technologies achieve their advantage by permitting the performance of ordinary ability and modest experience to approach, or even to surpass, that of skilled, experienced workers. They reduce an organization's dependence on costly, scarce skills. This has happened by reducing complex activities to relatively simple tasks, and providing tools specially adapted to those tasks. The abilities of skilled workers are translated into functional characteristics of specialised tools. The sophistication and capabilities of these tools complement the skills of their users and thus compensate for the differences between their abilities

in fact

and those of highly skilled workers (1978:51).

Because online systems reduce the level of skill needed to perform activities when skill requirements decrease, the meaning of work may become trivial. Loss of motivation, status, and self-esteem is frequently the result (Malinconico, 1985:58).

According to Toren, there are a number of ways by which a profession may lose its status. The important one is failure to retain autonomy. For a profession to be successful, it should be able to retain its professional autonomy which is the right accorded by the society to members of a profession to determine the nature of the problems, appropriate procedures by which these should be solved, and the evolution of professional performance (1975:325).

One of the principles on which professions base their claim to autonomy and monopoly is the assertion that professional work is non-routine. It is therefore the professional function to solve non-routine, complex and at other times critical problems. This implies that non-routine situations can only be handled by exceptional expertise and judgement. In order to retain monopoly and autonomy of the profession, as well as adequately to perform this work, the professionals should be "insulated" from external control and guarded against encroachment of their tasks and by non-skilled workers. However in the recent times, the problems with which professionals deal, have been reduced to standard procedures and routines. (Toren, 1974:329)



The "demystifying" of the cataloguer's knowledge base by outsiders using new technology, creates a direct attack on the autonomy and monopoly of cataloguers and support the process of deprofessionalization.

Library and information services are losing their monopoly of information provision, as information technology begins to move into the market place. Commercial information providers are beginning to change from providing bibliographic references online, to full-text delivery to the user's desk, when it is required. The market place is becoming crowded, the entry barriers to information are being lowered and libraries run the risk of being sidelined if they do not improve service quality. One other feature of the changing professional employment market must also be noted in this context. With the reduced emphasis on "traditional" features of library work such as cataloguing and classification, there is a possibility (or risk) that increasing numbers of library staff will no longer come from a library background (Burton, 1992:99-100).

There are visible signs that the field of librarianship which includes cataloguing, has failed to retain this autonomy. As a result of the professional's reliance on computers for the generation of data they use, they have become more reliant on computer specialists and technicians for the access to information (Hafter, 1986:52).

It seems that scientific and technological advances and the

accompanying processes of specialization, standardization and routinization of professional practice have a potentially deprofessionalizing effect, especially on those professions whose knowledge base is primarily scientific and technical. Up to a certain point this process of specialization, standardization and routinization of problems and their solutions make professional work less complicated and uncertain, and further allows the delegation of routine activities to less qualified personnel thereby leaving the complex and difficult problems to the trained professional. Not much is therefore left to warrant a distinct professional status and its correlates (Toren:330).

Automated systems, in spite of their inability to exercise independent intelligence, are nonetheless able to displace intellectual effort by storing and providing direct access to previously worked out, complete solutions to specific problems. Shared cataloguing systems are an excellent illustration of this ability. Computerised systems cannot automatically catalogue newly received materials. Nonetheless, they can instantly and precisely recall how some anonymous, able, cataloguer catalogued the same or similar item, thus obviating the need for anyone with access to such a system to repeat this effort (Malinconico,1985:53).

Automation removes workers from direct involvement in the transformation process that constitutes a job. Their primary contribution in an automated process is to monitor activities or to review information and to ensure that relevant variables

assume appropriate values and do not exceed established limits. For example, rather than creating new cataloguing records, staff in cataloguing departments verify that source records found in a shared cataloguing database, represent newly acquired materials. The ready availability of computer-generated management information in general increases opportunities to control and monitor activities (Malinconico, 1985:55).

Winter (1993: 86) argued that although there is no doubt that innovation reduces the skill requirement for many jobs, thereby causing what is often referred to as deskilling, there are cases in which the opposite is true, and areas in which there is little significant change. Winter suggested that the concept of deskilling can be misleading if it is applied across the board, though there is no other convenient phrase which simultaneously expresses all the possibilities. For instance, in the field of librarianship, one finds examples of downward movement, but this is often accompanied by an upward movement. In other words deskilling is often followed by reskilling, that is adoption of new additional skills.

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This occurs in cataloguing, where more than 80% of titles can be obtained as copy from the bibliographic networks in the USA. There is a drastic decline in the numbers of material without copy and even in those libraries which have recently automated their services, there is not enough material on backlog to guarantee the survival of a large number of cataloguers.

Although this means that it is no longer necessary for cataloguers to produce copy for large stretches of output, it does not necessarily spell deskilling of all, since there is more time for analysis of a wide range of marginal and highly specialized formats that earlier generations were unable to address. If fewer of these professionals were present, the ones remaining could have much more supervisory responsibility than previously, since they are now free to coordinate paraprofessionals. The shifting nature of the labour process in these areas, permits them to pursue solutions to problems in the development, design and the critique of information systems (Winter, 1993:187).

Computerised systems encourage people to experience and to try different approaches to a task, or to a solution to the problem. With a traditional tool or a machine, a worker cannot learn much beyond its basic function. But with a computer, the capacity of both machine and a worker can grow the more it is used (Malinconico, 1985:61).

#### 2.4.1.3 Staff reductions and displacements

Information technology has not only been said to change the work processes, but it is also held responsible for reducing the need for professional cataloguers. Most of the routine operations of the library and information services, for instance circulation control and online cataloguing, have been affected by information technology. The integrative nature of library automation

eliminates the need for the traditional functional division into departments such as acquisitions, cataloguing and reader services, and creates a change in emphasis from technical to public service functions and thus to a service structure. This may result in the reduced demand for professional staff in technical services, on account of the provision of centralised online cataloguing services and the increased role of paraprofessionals. There is a reduced demand for the traditional skill of cataloguing and classification, since a larger proportion of catalogue records are no longer created in-house, but are downloaded from the bibliographic utility (Burton, 1992:93)

With the increased emphasis on technology, comes the harsh reality of job loss, obsolescence of skills and decreased opportunities. One of the most significant impacts of library automation on the technical services has indeed been its direct effect on cataloguing services staff and their jobs.

Based on the advancing technology, different writers have different views on how technological applications will affect the workers, and in this case cataloguers. Some writers argued that technology will enhance the skill of the workers. They say that the growing capabilities of computers will be reflected in activities such as systems analysis and decision making. These ideas are not shared by some analysts, although they also hold the same view that technology, automation and computers will dominate organisational and professional work activities. They

argue, however, that this combination of forces will create a vastly different result, namely is the "deprofessionalization" of the information society.

The application of information technology has led to the assumption of more sophisticated responsibilities by the staff at lower levels. While some of the professional cataloguers still prepare the original records, most cataloguing is now performed by non-professional staff. The non-professional staff do copy cataloguing which refers to using a cataloguing record from an outside source, for example the Library of Congress.

It has been suggested by different authors that much of the cataloguing and records maintenance formerly done by professional librarians is destined increasingly to fall in the hands of paraprofessional and clerical staff, and Preston is one of them. He forecasts that,

*"at least in the near term (technical services) staff will simply decrease as a consequence of higher productivity and less original cataloguing which results from automation and networks. It is after all, much simpler to merely reduce support staff than it is to revolutionize long entrenched library divisions and job responsibilities" (1983:131).*

Reduction of staff seems to be an option that some of the South African university libraries will probably choose. In the presentation made by Hinchliff, head of Technical services at the University of Cape Town in 1988, she stated that :

*"the chief benefit felt by the library was that as a result of cataloguing on-line on SABINET, we have been able to speed up the cataloguing process, increase output, cope with staff shortages and improve upon the efficiency of services to users. Although we have not yet reduced the number of cataloguing posts we may as well do so when the retrospective conversion of the manual catalogue which is (was) currently in the progress has been completed" (1988:33).*

With paraprofessionals doing much of the online cataloguing and with fewer professional librarians involved, some writers have speculated about the future of cataloguers. Indeed, Holley (1981:90) thought they are an endangered species. He saw the greater use of paraprofessionals, reduced budgets, standardization, de-emphasis of perfection cataloguing and automation as profoundly affecting the professional responsibilities of cataloguers. He felt that the numbers of cataloguers will continue to diminish and that the few remaining cataloguers, for instance in the case of United States, will be located at the Library of Congress, in large research libraries or in important specialized collections. In other libraries the cataloguer's jobs will change when they are transferred to other departments, or assume new responsibilities by becoming managers and planners and will therefore do little original cataloguing.

Foster also predicted that the cataloguer's job will be changed. In her view, while maintaining an orientation to the total

library organisation, technical services staff (including cataloguers) sometimes find their positions being redesigned or possibly eliminated within the automated environment. Other restructuring comes from the reduction in professional staff because of attrition followed by a shift in responsibilities to support staff with reclassified job descriptions (1988:76).

Hill said that the confusion which arises from using the terms "cataloguing" and "copy cataloguing" may lead to inappropriate decisions. The description and analysis of library materials from scratch require professional education and judgement. However, editing pre-existing copy for local use does not.

There is enough copy available from networks that depending on their size and collection most libraries can now obtain copy for 80-100% of the titles. Thus, to the extent that a library's acquisitions have copy available, some professional cataloguing positions can be abolished, and replaced by non-professionals (1988:95).

Just as the system reduces or eliminates the need for some functions, Rooks and Thompson said it also created the need for jobs which did not exist in the previous operations. These may include systems operators, programmers and analysts. Each of these jobs requires highly developed skills and training which may prohibit the direct transfer of staff from obsolete or extraneous tasks. Unless the libraries can afford the cost of these new positions, the funding of additional positions must be generated through the elimination of excess and obsolete



positions (1988:124).

A simplified distinction between professional and non-professional staff is that professionals make judgements, while non-professionals follow rules. As bibliographic networks and other external databases expand, and as automation imposes standardization on an increasing number of technical services operations, the amount of work over which judgement must be exercised, is shrinking. As technological developments enable increased speed and efficiency in non-professional tasks, the number of staff needing professional supervision decreases. However handling individual items, managing workflow, and supervision of staff are not the only tasks that call for professional training and perspectives (Hill,1988:95).

Not all writers believe that cataloguing requires professional judgement. In a study by Eskoz (1991:391), she concluded that professional catalogue librarians still spend too much time in routine cataloguing that could be delegated to well trained, high level paraprofessionals under supervision. She argues that cataloguing is not a mystic art and most of the skills required can be learned on the job. It does take dedication, experience, and consistency, and there must be careful training and supervision.

Bishoff also pointed out that, although technology has allowed almost all of the cataloguing needs to be performed by paraprofessionals and bibliographic utilities, there is still a

need for cataloguers. She said that cataloguers are needed for newly defined challenges such as staff training, system analysis, community information files, integrated systems design, technical services management and original cataloguing (1975: 696). Although Bishoff used the public library model, his views are also relevant in the academic library situation.

Early automation efforts have largely been single function e.g. circulation, cataloguing, or serials control. Bishoff suggested that with the development of integrated systems, tying all systems to the master bibliographic record, will require more of the cataloguer's knowledge and expertise. Secondly, the catalog librarian now turns into a systems designer who can coordinate the access needs of a variety of staff members and patrons with the requirements of the system. To achieve this, the cataloguer will have to combine her understanding of the capabilities of the online system and the role of different elements in the cataloguing record (1987:696).

With the diminished requirement for original cataloguing of monographs, the cataloguing of audio visual materials, government publications and local documents will still be necessary. The cataloguer's skill will be required for the management of the technical services department and this entails the allocation of human, material and financial resources (Bishoff, 1987:696).

However, some authors believed that the classification level appropriate for copy-cataloguing could be debated. Some

insisted that increased standardisation will enable use of less skilled workers, while others note that automation makes the work more complex, generating a general shift upwards in classification. Hill (1988:95) suggested that both views may be correct, on the basis that copy that is essentially accepted as it comes, can be handled by paraprofessionals, or if it must be thoroughly scrutinized and substantially altered, more highly trained paraprofessionals are required.

Gorman asserted that the present economic situation in libraries forces libraries to use the human and technical resources as efficiently as possible. The immense impact on automation on library processes has made it necessary for the examination of these processes in order to distinguish between the professional task and the non-professional task. (1979:391) Furthermore, Gorman introduced what he called "the drift down theory", which states that no professional should do the task that a paraprofessional can do; that no paraprofessional should do the work that clerical staff can do, and that no human being should do the task that the machine can do. According to Gorman, this will result in job satisfaction at all levels, the best use of human resources, increased efficiency, and , hence better services (1990:8).

Haftor felt that the shifting of labour does not empower the

cataloguers but makes them lose their status. She argued that as a result of network participation, library cataloguers find themselves with diminished ability to control the workflow, the organisation, the overall quality standards and the planning of new services in their work environments. Moreover, the loss of ability to catalogue the most important books or those in greatest demand, greatly undermines the faith of cataloguers, and all the library personnel, in the assertion that they are performing significant and useful tasks that have social value within the library context.

Barnett questioned the findings of Hafter in her conclusion that dependence of academic libraries on the online bibliographic networks has led to deprofessionalization of cataloguing. She argued that cataloguers spoken to in the survey carried out by Hafter, seemed to have lost a sense of cataloguing as a demanding intellectual activity and have been unable to convey the challenges posed in creating original records for an online bibliographic network in academic libraries;

*"for it is now essential that the cataloguers possess detailed knowledge of the networks standards, format documents, and procedures, in addition to the current cataloguing code. The item in hand must be described, distinguished from related works in the library's collection, and made accessible to local users through appropriate classification and subject heading assignment. It must represent a new contribution to the bibliographic database and must be prepared for input standards. The record must also be created rapidly without*

any sacrifice of accuracy and quality, because technical services administrators and library directors monitor cataloguing statistics and question low production rates" (1988:99).

Veaner saw the impact of automation differently from the way in which Hafter presented it. According to Veaner (1984:624), the shift of tasks from professional staff to support staff illustrates an important social aspect of "technological imperative". Once technology is applied to carry out very complex, routine mental work, that work is driven downward in the work hierarchy, away from professionals, whose work then expands to comprehend new and more challenging responsibilities, such as those librarians now carry out. The librarian acquires a much more closely definable professional responsibility. The change not only enriches the jobs of support staff, but provides magnificent professional enrichment and opportunities for librarians.

In today's libraries, bibliographic utilities have made it impossible to justify maintaining the large staffs of professional cataloguers which have been necessary in the past. Gorman presented the most persuasive case for the erosion of the technical-public services dichotomy: "the distinction has undoubtedly wasted money and human resources because the specialization implied by two types of librarians within one library has not allowed either category to reach full efficiency."

One of Gorman's main arguments against the division of public and technical services is that it separates two functions which should logically be integrated, namely the functions of cataloguing and reference work. The cataloguer has the subject expertise and is responsible for the creation of access points yet is never allowed to apply this knowledge in reference work where it would prove very useful. By the same token, reference librarians work in an area where knowledge of cataloguing skills is very important, but according to Gorman they are often very ignorant as far as cataloguing is concerned (1979:435).

#### 2.4.2 Authority Control

Another important role that falls within the domain of the cataloguing librarian, is authority control. Authority control includes the establishment of headings and the creation of authority files. It consists of the linking of authority records to bibliographic records to ensure consistent forms of headings and a cross reference structure. Authority control helps to fulfil the collocation function of the catalogue (Godden, 1991:177).

Cataloguers have years of experience in authority control and it is vital that they learn how to merge this knowledge with the new technology, as authority control is a professional function that is likely to continue to grow in importance.

Library automation has introduced some new factors into authority work, giving rise to the databases shared by networks of libraries. The networks originated to enable libraries to share cataloguing and, thus, reduce the cost of cataloguing for all participants. However, participation in networks complicates authority work. Authority control, necessary for the optimum use of the catalogue of a single library, is especially desirable in a shared database (Wajenberg, 1990:86).

The responsibility for authority control has traditionally been somewhat diffused throughout the cataloguing department. The establishment of new headings has been considered a professional's responsibility, and has been assigned to cataloguers. Copy cataloguers may be involved in some aspects of authority work. For example, they may establish locally the headings for which Library of Congress established headings can be found (Godden, 1991:177).

Ludy and Rogers (1984) say that methods of providing authority control have changed in recent years in response to library automation. The changes have preserved the traditional functions of authority control while making use of the capabilities of the computer and the availability of machine readable data. Shifts have occurred in when, how and by whom authority work is done. The shifts can be described as the move from pre- to post cataloguing authority work, that is the separation of mechanical and intellectual tasks; with the automation of the former, and the imposition of authority control at different levels (i.e

national library, network or individual library). Authority control does not readily lend itself to automation and could remain a significant source of skill and job enrichment.



### 3. THE EMPIRICAL INVESTIGATION

#### 3.1 Design and methodology

A wide range of techniques can be used to collect data. As the basic purpose of many methods is to attempt to collect specific data from the public, the choice of the most appropriate instrument of collection is essential (Line, 1982:92). Among these techniques, surveys are probably the most common form of research method.

Observational and questioning techniques are generally employed to obtain data directly and indirectly from respondents whereas the examination and analysis of documentary sources yields a secondary source of data. (Smith, 1983 : 18)

Two techniques can be used when observation actually forms one of the methods used in a research project. These are participant observation, which is concerned with putting oneself in the place of a client or user and seeing what happens, whereas in non-participant observation the researcher remains detached from the activity under observation and simply watches and records what is going on. (Moore, 1983 : 13)

The advantages of observation are that it is a relatively straightforward method which provides the researcher with direct experience of a service either through very close observation or through being on the receiving end. Observation furthermore

avoids the sort of bias from respondents which other research methods introduce. As far as possible it leaves the client undisturbed and it is possible to record undisturbed behaviour.

(Moore, 1993 : 13)

The disadvantage of observation however is that it is very time consuming and labour intensive. Because of time limitations it was therefore regarded as an inappropriate method of carrying this research successfully.

The decision not to consider observation, then leaves the questioning procedures as the next alternative. These methods can be divided into self-administered questioning methods and interview techniques. They are methods suitable for obtaining data on a wide range of phenomena and for providing data on the values, expectations and behavioural relationships of an individual. (Smith, 1983:18)

A number of factors render the interview a suitable survey method. The interview method almost always produces a better response rate (Powell, 1991:107). This is apparently because of the personal contact of the interview which helps to encourage persons to respond fully. The inherent personal contact also provides greater capacity for clarification of ambiguities and misunderstandings than the questionnaires. (Powell, 1991:107)

The interview enables the interviewer to probe when necessary

(Smith, 1983:20). That is the interviewer has a chance to ask for further clarification of answers and can obtain results with greater depth.

The disadvantages of the personal interviews are that they can be time-consuming and expensive especially in a scattered geographical area (Busha and Harter, 1980:78). The interview method does not guarantee anonymity and it is open to many forms of bias as there is a social interaction between the interviewer and the respondents (Smith, 1983:20). Due to these shortfalls the interview was also rejected for this research.

Following a thorough examination of these techniques in relation to the research question, the questionnaire was chosen. The questionnaire, especially the mail questionnaire, is advantageous in that it encourages frank answers and can guarantee anonymity for the respondent as it is completed in the absence of the researcher (Powell, 1991:84). The questionnaire allows a wider range and distribution of the samples in a relatively short period of time than the survey interview method and it is inexpensive to administer. The questionnaire also makes the quantitative data relatively easy to collect and analyse. (Busha and Harter, 1980:62)

In the questionnaire the questions are all presented in a consistent format and style, and there is little scope for bias to be introduced by different researchers. Linked to this is the fact that the survey is impersonal and avoids some of the

problems which can develop during the interaction between an interviewer and a respondent (Moore, 1983:18).

The weaknesses of the questionnaire lie in the fact that it eliminates personal contact between the researcher and the respondent, thus causing the researcher to gain insufficient knowledge about participants in a study (Powell, 1991:85). It does not allow the respondent to quantify answers to ambiguous questions, or at least makes it more difficult to do so. (Busha and Harter, 1980:63)

With the questionnaire, the respondents are less likely to be motivated enough to complete and return the questionnaire. The use of the questionnaire might therefore lead to non-response. The response rate is generally low because of possible lack of enthusiasm and the hostility which some people have towards the questionnaire.

#### 3.1.1 Questionnaire construction

The design of the questionnaire is very important for the successful execution of the survey. It requires careful planning and arranging of the questions.

Busha and Harter (190:63) suggest that when preparing a questionnaire, it is important that the researcher should firstly understand the research problem at hand. For this research it was essential for the researcher to familiarise herself with the

literature concerning technological innovation in technical services, especially cataloguing.

The question content should be relevant, simple, unambiguous and well balanced, and also carefully positioned. Question sequence should lead from the general to the more specific, in a consistent and logical manner (Busha and Harter, 1980:72-73).

The questionnaire should be as brief as possible and should solicit only data essential to the research project. This need not lessen the adequacy of the instrument (Leedy, 1993:189). The length of the questionnaire should be controlled; the longer the questionnaire, the lower the response rate is likely to be (Martyn and Lancaster, 1981:8). It was important that the length of the questionnaire be taken into consideration, as the cataloguing department is one of the busiest sections of the library.

The questionnaire should be interesting and easy to complete. To be interesting, the topics of the questionnaire should be professional or of social concern to the potential respondents. The more important a respondent feels a subject is to him or her, the greater the chance of answering the questions. The more closely a questionnaire deals with something that concerns respondents, the higher the potential response rate (Martyn and Lancaster, 1981:12). In this research, the questionnaires seemed to be relevant to the cataloguers.

Martyn and Lancaster (1982:8) emphasized the importance of designing questions which will yield a good response rate. They mentioned that the ideal questionnaire is brief, attractive, asks unambiguous questions, is interesting and easy to complete, can be analysed with little effort and interpreted without difficulty, to provide clear and concise information on which to base decisions. The questionnaire in this research was therefore pre-coded so as to minimize misunderstanding which could lead to low response rate.

Pre-coding questions means that the questionnaire provides the answers from which a respondent may choose, by placing a tick in the box, otherwise the questionnaire may give the respondent a chance to give an answer in an open ended question (Line,1982:58). It is necessary to ensure that the responses provided, cover all shades of opinion in pre-coded questions. The questions may also include an "other" or "specify" category in order to cater for unanticipated answers.

### 3.2 Pilot survey

The purpose of a pilot study is for pre-testing the research design, for example, the questionnaire which has been devised.

The pre-testing of the piloting questionnaire is necessary, in that it provides the researcher with an opportunity to identify questionnaire items that tend to be misunderstood by participants, unnecessary questions and poor questions. Pre-

testing also helps to refine the data collection instrument, and check that nothing has been overlooked. Responses and criticisms from the pilot study may help to identify the weak parts of the questionnaire and to identify problematic questions before the final distribution of the questionnaire can be done.

It is also important that the pretest sample is representative of the final study group. Ideally, a pretest sample should be as scientifically selected as the sample for the final study. It should be randomly selected and of an adequate size to permit generalizations to the population (Powell, 1991:100). In this survey nine cataloguers from the South African Library were chosen for a pilot study. Although this is not an academic, but a national library, it was chosen as the level of its cataloguing was similar to that of the academic libraries selected for the investigation. The researcher sent questionnaires, and these were later collected from the librarian. Following this, the questionnaires were analysed to find out if the questions would produce the information which the researcher would use in this survey.

Besides the questionnaires, the respondents in the pilot survey were also sent a form to say if they found the questions easy to understand and respond to. The respondents were further requested to provide some information which they thought would also be helpful in the survey, e.g the questions which they thought would be necessary to ask.

The pilot study helped the researcher in this research to limit the technical words as some of them were not readily understood by the respondents.

### 3.3 Survey population

The concept of population is fundamental to survey research. A population is any set of persons or objects that possess at least one common characteristic. (Busha and Harter, 1908:56)

In this study, the survey population consisted of professional cataloguers in the academic libraries in the Western Cape. Professionals here referred to those qualified cataloguers who hold a minimum of a bachelor's degree and a professional diploma or more in the field of library and information science. The academic libraries referred to the tertiary level institutions libraries in the Western Cape namely, the University of Cape Town, the University of Stellenbosch and the University of Western Cape and the two technikons, the Cape Technikon and the Peninsula Technikon.

### 3.4 Questionnaire distribution

The questionnaires were posted to the heads of the cataloguing departments instead of the individual cataloguers. The head in turn distributed the questionnaire among the cataloguers. The decision to apply this method of distribution was taken after one of the libraries was contacted in order to obtain a list of the cataloguers. The concerned head suggested that this would not



provide a good response rate.

Each questionnaire was accompanied by a stamped, self addressed envelope in order to encourage the return of the questionnaire. The covering letter also accompanied the questionnaire stating the reason for the survey. This also stated the suggested date on which the questionnaires should be returned. Examples of the covering letter and questionnaire are attached in Appendix one (1) and two (2).

A total number of 49 cataloguers was identified in all the libraries and therefore a total number of 49 questionnaires were sent, depending on the number of cataloguers in individual libraries.

### 3.5 Limitations of the study

Due to time limitations and lack of monetary funds to support the dissertation, the study was limited to academic libraries and the Western Cape.

### 3.6 Data Analysis

#### 3.6.1 Overall response

Before the questionnaires were sent to the respective libraries, heads of the cataloguing departments were contacted by telephone. This was done in order to acquire the permission to send the questionnaires to the cataloguers. Where the heads of the

departments could not grant such permission, the chief librarian was consulted. The responsible people were asked to provide the total number of the professional full-time cataloguers.

The following table represents the total number of cataloguers in the libraries, the number of respondents, and the percentage of response.

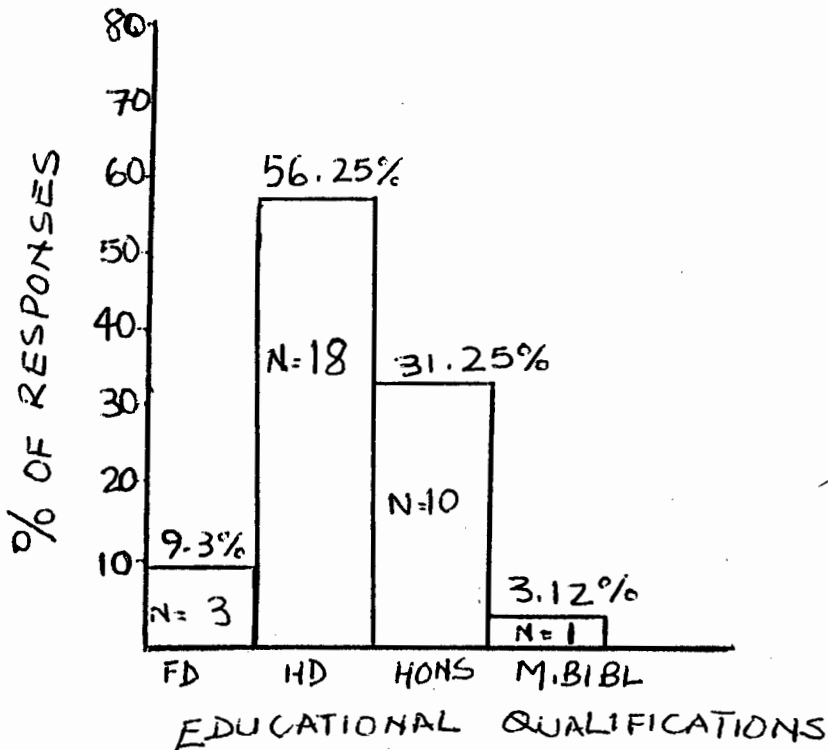
TABLE 1 : Tabulation of overall response

Library	Total no.of cataloguers	No. of respondents	% response
UCT	15	13	86.6
Stellenbosch	11	11	100
UWC	20	4	20
Pen Tech	2	2	100
Cape Tech	2	2	100
Total	50	32	64

The total percentage of respondents was 64%. This can be interpreted as good, in that it was more than 50% response. However, the non-response from some librarians reflects the limitations of a mail-questionnaire: although it guarantees anonymity, it also encourages non-response.

Question 1 concerned the educational qualifications of the respondents. This question was posed in order to find out the educational qualifications of the cataloguers in academic libraries in the Western Cape. The results are graphically presented in figure one.

FIGURE ONE : Presentation of educational qualifications



FD - First degree

HD - Higher diploma/postgraduate diploma

HONS - Honours/B.bibl

M.Bibl - Masters

N - Number

The results show that in all the libraries surveyed, the qualifications of the cataloguers range from the first degree in library science to masters in library science.

The results could also be interpreted as an indication that cataloguing is perceived to require intellectual effort. The

educational background apparently is expected to enable the professional cataloguer to make informed decisions and could also be seen as necessary for quality cataloguing.

Question 2 concerned the period of time that the respondents have spent in their current posts.

Table 2 : Tabulation of the time period spent in current posts.

No. of years	Tally	Frequency
0-1	III	5
1-5	III	5
more than 5	III III I	21

In question 3 only one academic library, among the ones surveyed, had its catalogue automated more than ten years ago : the University of Western Cape which automated in 1977. Two libraries had their catalogues automated more than five years back, these are University of Stellenbosch (1986) and Peninsula Technikon (1989). The University of Cape Town (UCT) and Cape Technikon (Cape Tech) had their catalogues automated less than five years ago i.e UCT in 1990 and Cape Tech in 1992.

In question 4 cataloguers were asked whether they regard the automated catalogue as a satisfactory tool for the retrieval of material held in the library.

Table 3 : Summary of whether the auto<sup>a</sup>nted catalogue was regarded as a satisfactory tool

YES	NO
29	3

Duties performed prior to automation (questions 5 and 6). These questions were asked in order to establish whether the respondents had already been involved in cataloguing before automation.

Out of the total number of respondents (32), 20 respondents showed that they had already been involved in cataloguing before automation. Six of the respondents were not appointed or working in the department then, the other six respondents did not respond to the question.

It can be assumed that the six people who answered NO and the six that did not respond, were either working in other sections of the library, or were not appointed into their posts before computerisation. Of those respondents who answered NO to the question, some confirmed that they were working in other departments such as circulation, reference and periodicals. Two respondents from UCT stated that their appointment to the cataloguing department was recent - about six months. Before automation one had been a reference librarian while the other had been in the periodicals department. The duties which were performed along with cataloguing, included selection of orders, collection development, information retrieval, filing of

catalogue cards, loose leaf filling, interlibrary loan, reference enquiries and circulation.

In manual systems, cataloguing includes a greater variety of duties for the cataloguers than in automated systems. Some of these duties consist of laborious and repetitious tasks such as the creation and filing of catalogue cards which have been eliminated in the computerised system.

Question 7 asked the respondents if they still perform the same duties which were performed before automation. Thirteen respondents replied that they still perform those duties, with some showing that tasks such as filing of cards have been eliminated. One respondent said that the job has not changed, but what has changed is the speed at which things are done.

Ten respondents said that they no longer do the same tasks. The tasks which are at present being performed, include quality control, authority control, supervision and training of staff. These are tasks which need human effort and have therefore not been affected or eliminated by the computer.

It can be assumed that eight non-responses make up for those cataloguers who were not appointed in cataloguing and some of those who were in other sections of the library. Some respondents said that automation changed their jobs.

Question 8 established how people see automation in relation to

their jobs. All the twenty four respondents who said automation changed their jobs in question 8 said that this has been a positive change. Change which was brought by computers, was normally perceived as positive, as the processes which were repetitive could now be done more quickly. This was expressed by one of the respondents who commented that:

*"time can now be spent doing intellectual aspects like assigning subject headings, devising authority files with see-references because the routine aspects are now quicker and require less input."*

It may be assumed that those people who did not see their jobs as having changed by computerisation, see computerisation as a negative change and are still battling to adapt to the new environment.

One respondent commented that :

*"Any problems in the automated system have to be resolved by computerisation staff. In the old days problems in the card catalogue were handled by cataloguers."*

Perhaps what the respondent meant by the computerisation staff can be interpreted to mean systems analysts. It may be that the respondent feels that those people are taking over their responsibilities and feels displaced.

Table 4 : Summary of whether automation has changed the cataloguers jobs.

Library	Yes	No
UCT	11	2
UWC	3	1
Stellenbosch	11	0
Pen Tech	2	0
Cape Tech	2	0

Table 5 : Summary of whether automation has brought a positive or a negative change on the cataloguers jobs.

Library	Positive	Negation
UCT	11	0
UWC	3	0
Stellenbosch	11	0
Pen Tech	2	0
Cape Tech	2	0

All the respondents who said automation changed their jobs saw this as a positive change. It was therefore assumed that they considered computers to have enriched their jobs.

Question 9 sought information about the members of the non-professional staff and whether there had been increases in their numbers (question 9.1). This was a problematic question, as the respondents appeared not to know exactly what the ranges of non-



professionals in their departments were.

Question 9 was divided in ranges of (1). NONE; (2). 1-5 and (3). more than 5. It was thought that this would be easier for the respondents as they would not necessarily have to count heads.

The following are the responses which were presented: The response from Cape Technikon showed that there are between 1 - 5 non-professionals as against one professional cataloguer. There has also been an increase in the numbers of the non-professional staff since automation.

At Pen Tech respondents said that there are 1-5 non-professionals and there has not been any increase in their numbers. At UWC 3 respondents said there are no non-professional members and 1 said there are more than 5 professional members of the staff.

At Stellenbosch all respondents said there are more than 5 non-professionals. They differed in their responses to question 9.1, however, as 9 people said there had been an increase in the number of non-professionals and 2 said there has not been any increases.

Responses from UCT also varied. Here the responses varied from NONE to more than 5. One person said there are no non-professionals in the department. Three said there are between 1-5 and 8 respondents said there are more than 5 members. All

the members pointed out that there has not been any increases in the numbers of staff.

There are two possibilities which were noted as to why respondents gave varying answers to this question. Firstly, it may be that both the non-professional and the professional staff, where such staff exists, perform the same tasks and therefore some people do not know who is the qualified cataloguer and who is not. Another possibility is that, some respondents found the question to be too demanding as they would have to go to a trouble of counting heads.

In order to verify this question, a follow up interview was conducted with the heads of the cataloguing departments and the following information was acquired.

Table 6

Library	NO. of non-professional staff
UCT	7
Stellenbosch	1
UWC	0
Pen Tech	1
Cape Tech	1

Automation has resulted in important organisational changes in cataloguing departments. In the studies which were conducted in the US and other countries it was found that copy cataloguing is

usually performed by the non-professionals and not by the professional staff. Technology has relieved the cataloguers of this duty and has therefore delegated it to the non-professionals. It was therefore necessary to find who does copy cataloguing in the five academic libraries under consideration in South Africa. Question 10 was therefore meant to address this subject by asking who does copy cataloguing. This question also posed the same problems as the previous one, that is inconsistency in responses.

At the Cape Tech, copy cataloguing is done by the non-professional staff members only. The cataloguer in this library commented that she has confidence in the non-professional staff member to do the job efficiently :

*"I have to accept that a lot of the bulk work (copy-cataloguing) passes through without being seen by me, but as the quality of the automated catalogue is good, I have come to trust the work of the skilled, trained non-professional staff."*

Likewise at Pen Tech, copy cataloguing is also done by the non-professional staff.

At UWC two respondents said that non-professional staff do copy cataloguing, and one said it is done by both and four said it is done by professionals. Six respondents from Stellenbosch said non-professional staff do copy cataloguing, two said it is done

by the professional staff and three said it is carried out by both the professional and non-professionals. Two respondents from UCT said that non-professional staff do copy-cataloguing, ten said it is done by professionals and one said it is done by both.

There may be different reasons why the answers provided by the respondents from the same library varied in this way. Firstly, it may be assumed that there is no clear distinction in the duties of professional and non-professional staff. Perhaps their duties overlap. Secondly, the staff may not be aware of their job descriptions and thirdly, it may be assumed that the cataloguers do not really know what entails copy-cataloguing. In this case it may be that the professional staff members get involved in copy-cataloguing where the copy may be needing some modifications which requires a professional input, and they therefore consider that as copy cataloguing. Lastly, it can also be assumed from this data that in some libraries both the professionals and non-professionals do copy-cataloguing.

As in question 9, a follow up interview was conducted in order to get more clarification on question 10.

At UCT, there are seven non-professional members of staff in the cataloguing department. Although they are working in this department, they do not perform copy cataloguing. Both original cataloguing and copy cataloguing are done by the professional staff members only.

Stellenbosch has one non-professional member, who does copy cataloguing. The Stellenbosch interviewee said that due to economic reasons they have not been able to hire more non-professional staff. At the moment the professional members of staff who are resigning, are not being replaced by professional staff, but will be replaced by the para-professionals.

UWC uses a different system from the other institutions. It uses the system of subject librarians. The subject librarians do everything from reference work to copy cataloguing, and therefore they do not have any non-professional staff members.

Cape Tech and Pen Tech both have copy cataloguing executed by the paraprofessionals.

Question 11 was to establish whether the professional staff do original cataloguing. The respondents from all the libraries which participated in the survey said they all do original cataloguing. So, all (100%) of the respondents engage in original cataloguing .

Question 11.1 was asked in order to find out the type of material which still requires original cataloguing. It emerged that material or documents for which copy is not available on the network (SABINET) is catalogued from scratch. Furthermore, non-book material such as compact discs, audio visual materials, maps and, microfiches requires original cataloguing. The cataloguer

also input serials, pamphlets, unpublished dissertations and theses and articles in foreign languages.

It may be concluded that there is a need for cataloguers, as a variety of material which needs original and professional input is collected. This may require subject specialisation especially for the material which is in foreign languages.

When asked if there are other responsibilities which are performed by the cataloguers besides cataloguing, 22 respondents (68.7%) said that automation has left them with other duties while ten (31.2%) said they do not have any responsibilities besides cataloguing (question 12).

Among tasks which are performed by cataloguers are: supervision of staff which is done by 16.7% of the total respondents; decision making which is done by 23.3%; and authority control which performed by 60% of the total respondents. Other duties include training, administrative work, reference work, quality control, shelf reading, bibliographic instruction and acquisitions.

One respondent specified that the duties are very broad. They include reference work and a variety of administrative duties. This could perhaps support the point raised by some authors, that there is an indication of the emergence of crossover of duties in academic libraries which may see the cataloguers working in other departments besides cataloguing.

It has been speculated by different writers that the increased reliance on networks and the increased availability of copy which requires the input of non-professionals, will lead to the reduction of professional cataloguers in libraries.

Question 13 therefore asked the respondents whether there had been any changes in the numbers of cataloguers since automation.

There has not been any changes in three libraries, that is, Cape Tech, Pen Tech and UWC. Changes in numbers of cataloguing staff at the other two institutions had not occurred due to staff displacements or transfers to other departments, neither had it occurred because of the reductions done by management. In Stellenbosch a decrease in cataloguing staff was as a result of resignations. Although this left some vacant posts in the department, they were not filled because of rationalisation due to financial reasons. This was not only occurring in cataloguing, but in other departments as well.

At UCT, an increased number of staff was noted. It was however said that this was not necessarily an increase of professional full time cataloguers, but an increase in the number of part-time contract cataloguers. This was also the case in Stellenbosch. This therefore poses this question: is the hiring of part-time contract cataloguers a result of financial constraints, or due to the forecast by management that a large number of cataloguers may not be required in the future?

Automation is perceived to have affected the skills of cataloguers. In some cases, it is assumed that skills will be enhanced by growing capabilities of the computers and will be reflected in activities such as systems analysis and decision making, while on the other hand it is perceived that technology will negatively affect the skills of cataloguers (question 14).

The majority which is 26/32 or 81.25% of cataloguers thought that automation improved their skills. New skills have been added and computer skills have also been learned and cataloguers are now being required to learn new cataloguing formats such as SAMARC. Around 3/32 or 9.37% respondents said technology has led to deterioration of skills. One respondent commented that "more time is now spend on authority file and maintenance work than on original cataloguing". Another 3/32 or 9.37% said they had experienced no changes.

Power (1985:150) said that automation increased the prestige and status of the library and its staff within an institution. He further showed that computerisation is perceived to be a good thing and those who use computers are thought to be modern, clever and efficient. This reinforces the findings of question 15.



Table 7 : Presentation of responses to the effects of automation on status of cataloguers (question 15)

	UWC	UCT	Stellen- bosch	Pen Tech	Cape Tech
Improv- ed status	1	9	5	2	0
Lowered status	0	1	0	0	0
No change	3	3	6	0	1

On the question of salaries (question 16) s, 93.5% said the salaries of cataloguers are the same a those of other librarians. Those who said they are more made 3.2% of the total response and another 3.2 % said they are less.

Respondents were asked to rate their jobs as they find them at present (question 17). Those respondents who found their jobs to be very satisfactory were 19, and 12 respondents rated their jobs as satisfactory, and one respondent found the job to be unsatisfactory. Respondents revealed their satisfaction and acceptance of automation for reasons which are "traditionally" associated with computers namely "fastness", "job stimulation" and "challenging".

The following are some of the comments made by respondents in regard to this question;

*"Your information needs are satisfied almost at a touch of a button. Having access to outside databases increases and helps one in dealing with problems of the work situation."*

*"The new skills I have had to learn have enriched my job. Cataloguing processes have become faster as a result of automation and more work can be done in the same time provided the system is up and running."*

*"When the system works well, the advantages of eliminating manual tasks are enormous in terms of speeding up the work flow and reducing tedious and monotonous tasks. However, total dependence on computers becomes disadvantageous when the system is down because workflow is seriously disrupted and level of frustration rises."*

*"I find cataloguing especially original cataloguing very stimulating."*

*"Automation has widened the scope of cataloguing resulting in greater interaction with other areas within the library. Greater expertise due to use of integrated system has enhanced status of cataloguing."*

*"The work that I do now as a cataloguer is more professional"*

*than my previous job (administrative in nature)."*

The respondent who said that the job is unsatisfactory, said that computerisation has increased work pressure on the cataloguers. The respondent, however, had not specified what exactly had increased. It may be possible that this respondent had little opportunity for professional advancement and therefore feels victimized by the demands of automation. It should therefore be emphasized, however, that the majority of respondents (59.3%) found their jobs to very satisfactory, while (35.5%) found them to be satisfactory and only (3.12%) said their jobs were unsatisfactory. One therefore cannot but conclude that automation has been a positive influence on the way in which cataloguers view their jobs.

#### 4. CONCLUSIONS

Following the analysis of data collected from the cataloguers in the concerned libraries, a number of conclusions were drawn. These will be based on the statement of problem set out in 1.1.1.

##### 4.1 Review of statement of problem

- (i) The first problem statement was that information technology has changed the jobs of cataloguers.

This statement was proven. The survey revealed that automation has indeed changed their jobs. However, this was not the radical change that manifested itself in the USA and Britain. Instead, it has been a more positive one, because cataloguers view their jobs as having been enhanced by automation and the use of computers. The tasks are no longer repetitive it is quicker to perform duties which used to take longer with the use of manual systems

- (ii) Bibliographic utilities allow copy cataloguing to be executed at the lowest level by clerical staff.

The statement was confirmed, although not with 100% of the libraries surveyed. This was the case in 3 out of 5 libraries surveyed while in 2 out of 5 libraries this was not the case and copy cataloguing is still the field of professionals. However in the libraries where copy cataloguing has been delegated to

paraprofessionals, this has not produced a negative attitude or instilled fear among the professional staff. This may be due to the fact that there are still many responsibilities which require professional judgement, including original cataloguing, authority control and some administrative duties. In the Western Cape academic libraries there has not been a need for reallocation of staff and redefining of roles of the cataloguers.

(iii) Automation has led to reduction in size of cataloguing staff.

This statement has been substantiated. It was stated by the respondents in some libraries that the posts of the resigning staff were frozen as a result of economic reasons. Although this was due to financial constraints, automation allowed the remaining staff to perform duties without feeling the gap which had been left by the resigning staff.

(iv) That the perception exists that information technology deskills cataloguers.

This statement was not proven by the results of the survey. The cataloguers in the Western Cape did not agree that the use of technology has taken away the requirement for professional skills and intellectual judgement. Neither has technology caused their status to decline. Because there are still items requiring original cataloguing, this still demands the cataloguer's judgement. As mentioned earlier, authority control demands the

cataloguers judgement as well. Instead of deskilling, there has been a need for cataloguers to learn new skills such as computer skills, to do cataloguing on networks and to use SAMARC.

#### 4.2 SUMMARY OF CONCLUSIONS

Academic libraries in the Western Cape of South Africa are slightly behind the United States and Britain in terms of the technological revolution. However, technology has brought change and change demands new ways of doing things, such as the learning of new skills and the acceptance of new challenges and responsibilities.

It would be an exaggeration to say that technology alone has led to the changes in the libraries. Financial constraints also play a major role in the factors related to numbers of cataloguers in academic libraries. With increased budget cuts or less subsidy being allocated to academic institutions in South Africa, it can be concluded that the academic institutions have cut their budgets for libraries. The libraries also cut costs in cataloguing by assigning less staff to perform duties. Limited budgets have prevented the hiring of more staff where vacancies exist and opt for the use of contract staff which is less costly.

The number of professional librarians employed in cataloguing will most probably decline with the paraprofessionals being responsible for most of the cataloguing and the remaining

professionals performing little cataloguing and other duties outside cataloguing. An example of this can be seen in Stellenbosch where the resigning staff are not being replaced, but the posts of those resigning are being reserved for the paraprofessionals.

An inevitable result of financial constraints and technological innovation \_seems that the numbers of cataloguers will decline, but technology cannot do away with a need for professional cataloguers entirely. Anderson said:

*"To date...all of the expert cataloguing systems that have been developed require a human expert to participate in, monitor and/or complete the cataloguing process. The proof that technology can perform some aspects of cataloguing has been made, but the goal of developing a system that could enable a library to reduce costs by minimizing the professional involvement in the cataloguing processes has not been met" (quoted in Ruschoff, 1995:56).*

Although the increasing availability of copy cataloguing has provided paraprofessionals with a comfortable, and indeed, necessary niche in today's technical services department, Bishoff says that there are about five areas where the library will require a catalogue librarians's skills and knowledge. These are staff training; system analysis; integrated system design; technical services management; and original cataloguing (1987:694). Some evidence of these has also been identified in

the academic libraries in the Western Cape.

Gorman favours a more holistic approach in the technical services, where one librarian could perform all the tasks of selecting, ordering, cataloguing and reference work within a particular area. This is about doing away with the idea of "public services" (1979:436). This approach, suggested by Gorman, can be said to be similar to the method which has been adopted by one library in the survey; UWC. UWC's system of subject librarians has done away with what is known as the cataloguing department and technical services. Instead, the librarians, now called subject librarians, are responsible for all professional functions within their subject area.

From this survey, it can also be concluded that the cataloguers will have more of a role to play in the future. The role of cataloguers will expand into client services, that is more cataloguers will find themselves doing more bibliographic and reference work. There will also be new roles and new skill requirements in the automated libraries. → expand.

This investigation has not found significant signs of deskilling among the cataloguers in the Western Cape academic libraries. The cataloguers, unlike in those survey carried by Hafter, did not feel that their status is being negatively affected by the use of bibliographic networks.

This could be because there has not been much change between the



cataloguing of the past and that of today except that processes are now quicker. Numbers of paraprofessionals involved in cataloguing are very low and the numbers of professional cataloguers have not significantly diminished either. \_

Although copy cataloguing and simple original cataloguing is a task which in the vast majority of libraries in the United States has been assigned to paraprofessionals (Manning, 1984:32) this is not really taking place in the libraries which were surveyed. Cataloguers in these libraries, with the exception of Cape Tech and Pen Tech, still perform both original and copy cataloguing. In the other institutions these activities are both still under the control of cataloguers.

#### 4.3 RECOMMENDATIONS

The opinions which have been varied by cataloguers in the survey may not be held by cataloguers in other parts or regions of South Africa, so it may be more important to conduct a nationwide survey in order to determine or fully establish the effects that automation has had on cataloguers.

From the present investigation, however, one cannot but conclude that information technology has had a positive influence on the skills and self perception of cataloguers in the Western Cape.

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Dear.....

re: QUESTIONNAIRE ON DESKILLING OF CATALOGUERS

The field of library and information science is currently experiencing a lot of changes as a result of technological applications in its services. It is as a result of these changes, that being a master's student in this field, I wish to know how the skills of the professional cataloguers are being affected. The objective of this research is to find out if the technology is deskillling the professional cataloguers or not.

Would you kindly assist me by completing the accompanying questionnaire and return it to me in the envelope provided by.....

Thanking you in anticipation.

Yours faithfully,

'MAPASANE LEPHOTO

**APPENDIX B**

**QUESTIONNAIRE: TECHNOLOGY AND THE DESKILLING OF PROFESSIONAL CATALOGUERS**

The results of this questionnaire will be used for research purpose only and strict anonymity will be observed in the use of data. Please tick the blocks which correspond your answer and fill in your responses where answers have not been provided. Please feel free to use the space overleaf where enough space has not been provided.

1. What academic qualifications do you posses?

.....

2. For how long have you been in this department?

Less than 1 year  
Between 1 - 5 years  
More than 5 years


3. In which year was the catalogue automated?

.....

4. Do you regard the automated catalogue as a satisfactory tool with which to retrieve material held in the library?

Yes  
No


5. Prior to automation did your duties include cataloguing?

Yes  
No


6. What other duties did you perform?

.....  
.....  
.....

7. Do you still perform these duties?

Yes  
No


8. Has automation changed your job?

Yes  
No


8.1 If YES: has this been a negative/positive change?

Positive  
Negative




9. How many non-professional staff members work in this department?

None

Between 1 - 5

More than 5


9.1 Has there been an increase in the number of the non-professional staff since automation?

Yes

No


10. Who does copy cataloguing?

Professional staff

Non-professional staff

Both


11. Do you do original cataloguing?

Yes

No


11.1 If yes: which materials do you catalogue? Please list all.

.....  
.....  
.....

12. Has automation left you with other responsibilities besides cataloguing?

Yes

No


12.1 Which responsibilities are these?

Supervision of staff

Decision making

Authority control

Other (specify)


13. Since automation has there been any changes in the number of professional cataloguing staff?

Increased number

Decreased number

No changes


13.1 If there has been a reduction in numbers what has been the reason for that?

Transfers to other departments of the library

Resigned from the job

Reduction of staff by management

Other (specify)


14. What do you think the effects of automation have been in terms of your skills?

Improved skills  
Deterioration of skills  
No changes


15. How has automation (bibliographic networks) affected your status as a professional cataloguer?

Improved status  
Lowered status  
No changes


16. How are the salaries of the cataloguing staff as compared to the staff in other departments?

Less  
More  
The same


17. How do you find your job at present?

Very satisfactory  
Satisfactory  
Unsatisfactory  
Very unsatisfactory


Elaborate:

.....  
.....  
.....

Please not any further comments in the space below or overleaf:

.....  
.....  
.....